c. applying at least a first excimer laser shot and a second excimer laser shot to the corneal surface area, each of the laser shots spaced apart from each other and having,

i) a wavelength sufficient to cause ablation of the corneal surface,

ii) a center point and an area less than the corneal surface area;

d. spacing the center point of the first laser shot apart from the center point of the second laser shot so that any plume of ablated material caused by the first laser shot will not substantially interfere with the second laser shot's ablation of the corneal surface; and

B1 (cont.)

e. repeating steps c and d a sufficient number of times to effect a desired vision correction for the selected eye.

2. **(amended)** A method for correcting vision, comprising the steps of:

a. selecting an eye for treatment;

b. creating a surface flap of corneal tissue and folding the surface flap aside to expose a corneal surface having a corneal surface area;

c. applying at least a first excimer laser shot, a second excimer laser shot and a third laser shot to the corneal surface area, each of the laser shots spaced apart from each other and having,

i) a wavelength sufficient to cause ablation of the corneal surface,

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ii) a center point and an area less than the corneal surface area;

d. spacing the center point of the first laser shot apart from the center point of the second laser shot so that any plume of ablated material caused by the first laser shot will not substantially interfere with the second laser shot's ablation of the corneal surface;

e. spacing the center point of the third laser shot apart from the center points of the first laser shot and the second laser shot so that any plume of ablated material caused by the first laser shot or by the second laser shot will not substantially interfere with the third laser shot's ablation of the corneal surface;

B1 cont.

f. repeating steps c, d and e a sufficient number of times to effect a desired vision correction for the selected eye.

3. **(amended)** A method for correcting vision, comprising the steps of:

a. selecting an eye for treatment;

b. creating a surface flap of corneal tissue and folding the surface flap aside to expose a corneal surface having a corneal surface area;

c. applying a plurality of excimer laser shots to the corneal surface area, each of the laser shots spaced apart from each other and having,

i) a wavelength sufficient to cause ablation of the corneal surface,

ii) a center point and an area less than the corneal surface area;

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d. spacing the center point of each laser shot apart in time or distance from the center point of a previous laser shot so that any plume of ablated material caused by the previous laser shot will not substantially interfere with any subsequent laser shot's ablation of the corneal surface; and

e. repeating steps c and d a sufficient number of times to effect a desired vision correction for the selected eye.

4. **(amended)** A method for correcting vision, comprising the steps of:

3/ cont.

a. selecting a corneal surface area of an eye for treatment;

b. applying at least a first excimer laser shot and a second excimer laser shot to the corneal surface area, each of the laser shots spaced apart from each other and having,

i) a wavelength sufficient to cause ablation of the corneal surface,

ii) a center point and an area less than the corneal surface area;

c. spacing the center point of the first laser shot apart from the center point of the second laser shot so that any plume of ablated material caused by the first laser shot will not substantially interfere with the second laser shot's ablation of the corneal surface; and

d. repeating steps b and c a sufficient number of times to effect a desired vision correction for the selected eye.

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5. **(amended)** A method for correcting vision, comprising the steps of:

a. selecting a corneal surface area of an eye for treatment, the corneal surface area being either an external surface of the eye or an exposed internal surface of the eye; and

b. applying a plurality of excimer laser beam shots to the corneal surface area in a pattern, the pattern sufficient to locate the center point of each laser shot apart in time or distance from the center point of a previous laser shot so that any plume of ablated material caused by the previous laser shot will not substantially interfere with any subsequent laser shot's ablation of the corneal surface.

31 cont.

6. **(amended)** A method for correcting vision, comprising the steps of:

a. selecting an eye for treatment;

b. creating a surface flap of corneal tissue and folding the surface flap aside to expose a corneal surface having a corneal surface area;

c. applying at least a first excimer laser shot and a second excimer laser shot to the corneal surface area, each of the laser shots spaced apart from each other in time and distance and having,

i) a wavelength sufficient to cause ablation of the corneal surface,

ii) an area less than the corneal surface area;

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d. spacing the first laser shot apart in time from the second laser shot so that any plume of ablated material caused by the first laser shot will not substantially interfere with the second laser shot's ablation of the corneal surface; and

e. repeating steps c and d a sufficient number of times to effect a desired vision correction for the selected eye.

7. **(amended)** A method for correcting vision, comprising the steps of:

a. selecting an eye for treatment;

b. creating a surface flap of corneal tissue and folding the surface flap aside to expose a corneal surface having a corneal surface area;

c. applying at least a first excimer laser shot, a second excimer laser shot and a third excimer laser shot to the corneal surface area, each of the laser shots spaced apart from each other in time and distance and having,

i) a wavelength sufficient to cause ablation of the corneal surface,

ii) an area less than the corneal surface area;

d. spacing the first laser shot apart in time from the second laser shot so that any plume of ablated material caused by the first laser shot will not substantially interfere with the second laser shot's ablation of the corneal surface;

e. spacing the third laser shot apart in time from the first laser shot and the second laser shot so that any plume of ablated material caused by the first laser shot or by the

second laser shot will not substantially interfere with the third laser shot's ablation of the corneal surface;

f. repeating steps c, d and e a sufficient number of times to effect a desired vision correction for the selected eye.

8. **(amended)** A method for correcting vision, comprising the steps of:

a. selecting a corneal surface area of an eye for treatment;

b. applying at least a first excimer laser shot and a second excimer laser shot to the corneal surface area, each of the laser shots spaced apart from each other in time and distance and having,

i) a wavelength sufficient to cause ablation of the corneal surface,

ii) an area less than the corneal surface area;

c. spacing the first laser shot apart in time from the second laser shot so that any plume of ablated material caused by the first laser shot will not substantially interfere with the second laser shot's ablation of the corneal surface; and

d. repeating steps b and c a sufficient number of times to effect a desired vision correction for the selected eye.

9. **(amended)** A method for correcting vision, comprising the steps of:

a. selecting a corneal surface area of an eye for treatment, the corneal surface area being either an external surface of the eye or an exposed internal surface of the eye;

b. applying at least a first excimer laser shot, a second excimer laser shot and a third excimer laser shot to the corneal surface area, each of the laser shots spaced apart from each other and having,

i) a wavelength sufficient to cause ablation of the corneal surface,

ii) a center point and an area less than the corneal surface area;

31 cont.

c. spacing the center point of the first laser shot apart from the center point of the second laser shot so that any plume of ablated material caused by the first laser shot will not substantially interfere with the second laser shot's ablation of the corneal surface;

d. spacing the center point of the third laser shot apart from the center points of the first laser shot and the second laser shot so that any plume of ablated material caused by the first laser shot or by the second laser shot will not substantially interfere with the third laser shot's ablation of the corneal surface;

e. repeating steps b, c and d a sufficient number of times to effect a desired vision correction for the selected eye.

10. **(amended)** A method for correcting vision, comprising the steps of:

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[redacted]

a. selecting a corneal surface area of an eye for treatment, the corneal surface area being either an external surface of the eye or an exposed internal surface of the eye;

b. applying at least a first excimer laser shot, a second excimer laser shot and a third excimer laser shot to the corneal surface area, each of the laser shots spaced apart from each other in distance and time and having,

i) a wavelength sufficient to cause ablation of the corneal surface,

ii) an area less than the corneal surface area;

c. spacing the first laser shot apart in time from the second laser shot so that any plume of ablated material caused by the first laser shot will not substantially interfere with the second laser shot's ablation of the corneal surface;

d. spacing the third laser shot apart in time from the first laser shot and the second laser shot so that any plume of ablated material caused by the first laser shot or by the second laser shot will not substantially interfere with the third laser shot's ablation of the corneal surface;

e. repeating steps b, c and d a sufficient number of times to effect a desired vision correction for the selected eye.

11. The method recited in Claim 1, wherein the first and the second laser shot each has a pulse duration of approximately 50 nanoseconds, and a pulse rate of approximately 4 kHz.

12. The method recited in Claim 2, wherein the first, the second, and the third laser shot each has a pulse duration of approximately 50 nanoseconds, and a pulse rate of approximately 4 kHz.

13. The method recited in Claim 3, wherein each of the plurality of laser shots has a pulse duration of approximately 50 nanoseconds, and a pulse rate of approximately 4 kHz.

14. The method recited in Claim 4, wherein the first and the second laser shot each has a pulse duration of approximately 50 nanoseconds, and a pulse rate of approximately 4 kHz.

B cont.

15. The method recited in Claim 5, wherein each of the plurality of laser shots has a pulse duration of approximately 50 nanoseconds, and a pulse rate of approximately 4 kHz.

16. The method recited in Claim 6, wherein the first and the second laser shot each has a pulse duration of approximately 50 nanoseconds, and a pulse rate of approximately 4 kHz.

17. The method recited in Claim 7, wherein the first, the second, and the third laser shot each has a pulse duration of approximately 50 nanoseconds, and a pulse rate of approximately 4 kHz.

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18. The method recited in Claim 8, wherein the first and the second laser shot each has a pulse duration of approximately 50 nanoseconds, and a pulse rate of approximately 4 kHz.

19. The method recited in Claim 9, wherein the first, the second, and the third laser shot each has a pulse duration of approximately 50 nanoseconds, and a pulse rate of approximately 4 kHz.

20. The method recited in Claim 10, wherein the first, the second, and the third laser shot each has a pulse duration of approximately 50 nanoseconds, and a pulse rate of approximately 4 kHz.